

## *Understanding the evidence supporting school-based mentoring*

Michael J. Karcher, Ed.D., Ph.D., Professor  
 www.professorkarcher.com  
 University of Texas at San Antonio

### *School-based Mentoring: As Effective as Tutoring*

Well-run school-based mentoring programs for elementary and middle school aged youth can have impacts on truancy, attendance, and misbehavior that are similar in “size” ( $d = .25$ ) to the impact of the typical academic tutoring program on reading achievement ( $d = .26$ ) (Herrera, et al., 2007; Ritter, Barnett, Denny, & Albin, 2009).

A meta-analysis by Wheeler, Keller and DuBois (2010) of the effects of school-based mentoring averaged across the three most recent, large-scale studies:

U.S. Department of Education (Bernstein, Rappaport, Olsho, Hunt, & Levin, 2009),  
*Big Brothers Big Sisters* (Herrera, et al., 2007), and  
*Communities in Schools* (Karcher, 2008)

reports school-based mentoring resulted in statistically significant effects on truancy, attendance, and classroom misbehavior as well as in peer acceptance, the quality of students' relationships with adults, and academic self-efficacy. Other studies (e.g., of *YouthFriends*) also report improved school connectedness (Karcher, 2005; Portwood, Ayers, Kinnison, Waris, & Wise, 2005).

### *School-based Mentoring: As (or More) Effective as other After School Programs*

School-based mentoring (SBM) achieves results similar in size to (or larger than) other school-based after-school programs (see next page, Durlak & Weissberg, 2007). However, staff-lead after school programs don't allow the public to become more familiar with the public schools; its hard-working teachers, administrators, and staff; and local schools' needs, successes and achievements.

### *Cautions and Caveats*

#### *Lesson 1: One-on-One Mentoring Minimizes Deviancy Training*

Typically, one-on-one mentoring programs have another benefit over after school programs that work with students in groups. Mentoring does not put “delinquent” youth (those whose actions tend to undermine authority) into a group, which provides fertile ground for deviancy training (Dishion, McCord, & Poulin, 1999; Dodge, Dishion, & Lansford, 2006)

#### *Lesson 2: Misguided Mentoring (e.g., When Mentors Tutor, Teacher or Parent)*

Mentors who engage too quickly in academic activities, especially when such assistance is not requested by the youth, can undermine the quality of the relationship, the frequency of meetings, and length of the matches—whether volunteers choose to return for multiple-year matches (D. M. Hansen & Larson, 2007; K. Hansen & Corlett, 2007; Karcher, 2004).

#### *Lesson 3 (point of today's talk): The Importance of Best Practices*

As in the studies described below on tutoring and after school programs, the impact of mentoring depends on (and can be multiplied) by the support provided to volunteers, training of staff, and involvement of teachers, school staff, and parents. This is where we should focus our attention.

## Goals of Today's Talk

1. To explain the findings from the 2 largest school-based mentoring evaluations
2. Compare the effects of school-based mentoring to tutoring and after school programs
3. Underscore the importance of programmatic support in mentoring program impacts

Study #1: *Big Brothers Big Sisters School-based mentoring Impact Study* (Herrera et al., 2007)

Littles/Mentees fared significantly better than controls in:

1. Overall academic performance (T: Teacher Reported)(effect size, Cohen's  $d = .09$ )
2. Written and oral language (T;  $d = .09$ )
3. Science (T;  $d = .10$ )
4. Quality of class work (T;  $d = .12$ )
5. Number of assignments completed (T;  $d = .14$ )
6. **Fewer absence without an excuse (T;  $d = .26$ )**
7. **Engaging in serious school misconduct (T;  $d = .24$ )**
8. **Less likely to start to skip school (Youth Reported;  $d = .25$ )**
9. Scholastic efficacy (Youth Reported;  $d = .11$ )
10. More likely to have a "significant adult" in their lives) (Youth Reported;  $d = .18$ )

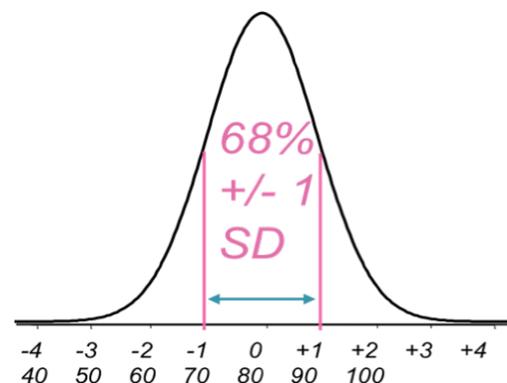
In Table 13 of Herrera's 2007 impact study (listed above) you find that the BBBSA SBM impacts on absences, initiating skipping school, and school misconduct are around  $d = .25$ . The effect size is a quarter of a standard deviation, or a  $d = .25$ . What does that mean?

Here Herrera is stating that mentored kids are .25 of a standard deviation (SD) "better" (which means lower) than the non-mentored kids at the end of the school year.

Whether .25 is meaningful or statistically significant depends on how much the actual scores of the mentees and the control group vary around their mean—that is, how big the SD is.

A  $d = .25$  (or 1/4 of a standard deviation) is about the same "size" as tutoring's impact on reading achievement (see Ritter, 2009). Let's use the effect of tutoring on grades as an example, because grades reflect a meaningful scale.

To understand the "size" ( $d = .25$ ) impact of the BBBSA SBM program on truancy and misconduct, consider "size" of the impact of tutoring on reading skills using grades as the outcome measure. If a student's grade point average (GPA) in a school is 80 (a "B-") before the program starts, and there is a one grade level standard deviation (10 points), this means that 68% of all students score between one grade level above and below 80: 68% of student's scores are between a C and an B+/A- (or a 70 and a 90). So, after tutoring, reading grades for tutored youth were 82.5.



Whether the increase of 2.5 points matters may depend on the youth—whether the starting GPA was 69, 75, or 89. Similarly, mentoring achieves a similar "size" effect.

In the U.S. DOE study, see Appendix D for the findings that were not subjected to the Benjamini-Hochberg test and which used the scales in the manner they were intended (validated). When the DOE evaluation used the regular significance level ( $p < .05$ ), in Appendix D, the findings align nicely w/ the BBBS SBM study.

DOE findings—using a 1-in-20 chance of a “false positive discovery”—are consistent w/ PPV findings

- Improved school efficacy ( $d = .09$ ),  $p = .02$
- Higher future orientation ( $d = .08$ ),  $p = .04$
- Lower truancy ( $d = .14$ ),  $p = .02$  (PPV found too)
- Lower absenteeism ( $d = .09$ ),  $p = .04$  (PPV too)
- Better relationships w/ adults ( $d = .09$ ),  $p = .02$  (PPV found mentees/Littles more likely to have a “significant adult” in their lives)

## Impact Evaluation of the U.S. Department of Education's Student Mentoring Program

Final Report

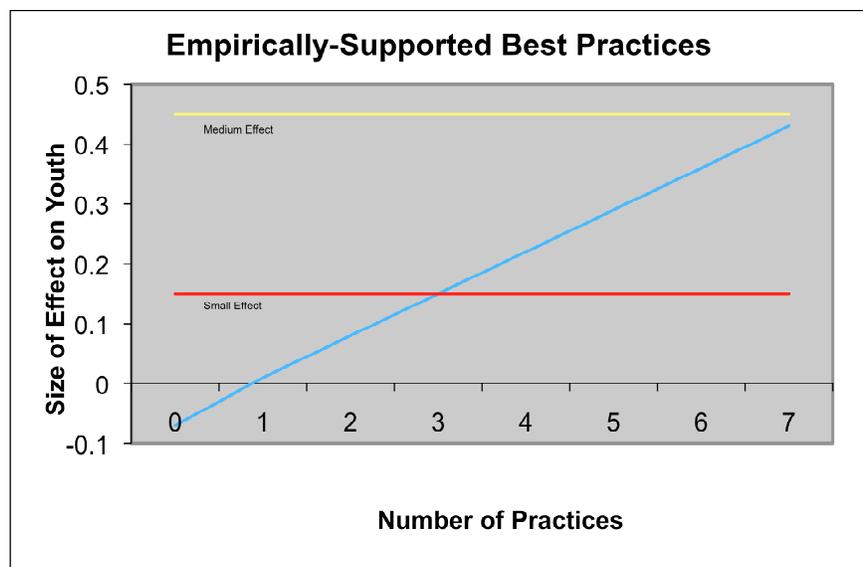
### *Summary of Effects*

Across evaluations of a range of school-based mentoring programs, Wheeler, DuBois, and Keller (2010) an average beneficial effect in the five following areas:

- Truancy ( $d=.18$ )
- Non-Familial Adult Relationships ( $d=.12$ )
- School-related Misconduct ( $d=.11$ )
- Perceived Scholastic Efficacy ( $d=.10$ )
- Peer Support ( $d=.07$ )
- Absenteeism ( $d = .07$ )

*Better practices = bigger outcomes*

DuBois et al.'s (2002) meta-analysis also taught us that mentoring program effects are larger when programs better mentor the mentors through training, support, and program monitoring practice.



It is this type of increase in impact that *a program* can provide by increasing the presence of mentoring best practices: screening, training, monitoring, and supporting matches.

So too is evidence that better structured program yield bigger impacts. For example, in the Ritter (2009) report of volunteer tutoring program, impacts on reading skills differed substantially for programs that provided varying tutor support: unstructured ( $d = .14$ ) vs. structured ( $d = .59$ ).

Durlak, J. A., & Weissberg, R. P. (2007). *The impact of after-school programs that promote personal and social skills*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning (CASEL).

**TABLE 3: MEAN EFFECTS FOR DIFFERENT OUTCOMES IN PARTICIPATING**

OUTCOMES	MEAN EFFECT SIZE	N
Feelings and Attitudes		
Child self-perceptions	0.34*	22
School bonding	0.14*	28
Indicators of Behavioral Adjustment		
Positive social behaviors	0.19*	35
Problem behaviors	0.18*	42
Drug use	0.11*	27
School Performance		
Achievement tests	0.16*	20
School grades	0.11*	25
School attendance	0.10	21

**TABLE 4: OUTCOMES FOR PROGRAMS THAT DID OR DID NOT MEET CRITERIA REGARDING THE USE OF EVIDENCE-BASED TRAINING APPROACHES**

OUTCOME	MET CRITERIA			DID NOT ES
	ES	N	95% CI	
Feelings and Attitudes				
Child self-perceptions	0.35*	20	0.24-0.46	0.14
School bonding	0.26*	13	0.12-0.47	0.03
Indicators of Behavioral Adjustment				
Positive social behaviors	0.30*	18	0.19-0.41	0.06
Problem behaviors	0.26*	21	0.16-0.37	0.07
Drug use	0.22*	11	0.07-0.36	0.03
School Performance				
Achievement tests	0.31	10	0.16-0.46	0.03
School grades	0.24*	9	0.07-0.42	0.05
School attendance	0.15	9	-0.01-0.31	0.07

\* Denotes mean effect is significantly different from zero at the .05 level

**Mentoring** refers to:

“a **relationship** between an older, more experienced **adult** and an **unrelated** protégé—a relationship in which the adult provides **ongoing** guidance, *instruction*, and encouragement **aimed** at developing **the competence and character** of the protégé” (Rhodes, 2002, *Stand by Me*, p.3)

### References

- Bernstein, L., Rappaport, C. D., Olsho, L., Hunt, D., & Levin, M. (2009). *Impact evaluation of the U.S. Department of Education's Student Mentoring Program: Final report*. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education, U.S. DOE.
- Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist*, 54, 755-764.
- Dodge, K. A., Dishion, T. J., & Lansford, J. E. (Eds.). (2006). *Deviant peer influences in programs for youth: Problems and solutions*. New York: Guilford.
- Durlak, J. A., & Weissberg, R. P. (2007). *The impact of after-school programs that promote personal and social skills*. Chicago: Collaborative for Academic, Social, and Emotional Learning.
- Hansen, D. M., & Larson, R. W. (2007). Amplifiers of developmental and negative experiences in organized activities: Dosage, motivation, lead roles, and adult-youth ratios. *Journal of Applied Developmental Psychology*, 28(4), 360-374.
- Hansen, K., & Corlett, J. (2007). *School-based mentoring match activities and relationship quality*. Philadelphia: BBBSA.
- Herrera, C., Grossman, J. B., Kauh, T. J., Feldman, A. F., McMaken, J., & Jucovy, L. Z. (2007). *Big Brothers Big Sisters school-based mentoring impact study*. Philadelphia: Public/ Private Ventures.
- Karcher, M. J. (2004). *The motivations of Hispanic mentors and the activities they use in their mentoring of Hispanic youth*. Paper presented at the Montgemery Lecture Award Symposium of the Latino Research Initiative, University of Nebraska-Lincoln.
- Karcher, M. J. (2005). The effects of developmental mentoring and High School mentors' attendance on their younger mentees' self-esteem, social skills, and connectedness. *Psychology in the Schools*, 42(1), 65-77.
- Karcher, M. J. (2008). The Study of Mentoring in the Learning Environment (SMILE): A randomized evaluation of the effectiveness of school-based mentoring. *Prevention Science*, 9(2), 99-113.
- Portwood, S. G., Ayers, P. M., Kinnison, K. E., Waris, R. G., & Wise, D. L. (2005). YouthFriends: Outcomes from a School-Based Mentoring Program. *Journal of Primary Prevention*, 26(2), p. 129-145.
- Ritter, G. W., Barnett, J. H., Denny, G. S., & Albin, G. R. (2009). The effectiveness of volunteer tutoring programs for elementary and middle school students: A meta-analysis. *Review of Educational Research*, 79(1), 3-38.
- Wheeler, M., Keller, T., & DuBois, D. (2010). Review of three recent randomized trials of school-based mentoring. *SRCD Social Policy Report*, 24(3), 1-21.

About Michael Karcher

[www.professorkarcher.com](http://www.professorkarcher.com)

Co-editor with David DuBois of *Handbook of Youth Mentoring* (Sage, 2005)

Co-author with Carla Herrera of the forthcoming *Lifting as we Climb: Achieving Positive Youth Development through School-based Mentoring* (Harvard, 2011)

Research Study Advisory Group Member:

BBBSA SBM Study (Herrera, 2007); DOE SBM Evaluation (Bernstein, 2009)

Principle Investigator: *Study of Mentoring in the Learning Environment* (SMILE, Karcher, 2008)

Contact [michael.karcher@utsa.edu](mailto:michael.karcher@utsa.edu) for additional information on this talk.

DuBois, D. L., & Karcher, M. J. (2005)(Eds.). *Handbook of youth mentoring*. Thousand Oaks, CA: Sage Publications. (Awarded "Best Edited Book" in 2006 by the *Society for Research on Adolescence*, Social Policy Awards, *the Handbook* remains the only comprehensive source for research-based findings on a wide array of youth mentoring programs, issues, and policies. The second edition is currently underway, and is scheduled for publication in 2011.)

Karcher, M. J. (2008). The Study of Mentoring in the Learning Environment (SMILE): A randomized evaluation of the effectiveness of school-based mentoring. *Prevention Science*, 9(2), 99-113. (This article reports the first peer reviewed findings from a large-scale, randomized study of school-based youth mentoring. Conducted through the Communities In Schools of San Antonio (CIS-SA) agency and funded by the William T. Grant Foundation between 2003-2006, this study revealed the benefits to Latino youth of having a school-based mentor. The study also identified which program practices contributed most to program impacts.)

Karcher, M. J. (2007). Cross-age peer mentoring. *Youth Mentoring: Research in Action*, 1(7), 3-17. (This is one of eight separately bound issues on youth mentoring. Each issue provides a summary of the research literature in the field on a specific topic, and then a team of practitioners report on the possible practice and policy implications of the research findings. MENTOR/National Mentoring Partnership commissioned eight authors to address some of the key topics in youth mentoring. Michael Karcher wrote this one, as well as co-authored with Carla Herrera one entitled, *School-based youth mentoring*. These were boxed as a set of 8 issues and made available to mentoring agencies nationwide.)

Research references for points made in the presentation and related issues of school-based mentoring practices (most can be downloaded from "publications" on [www.professorkarcher.com](http://www.professorkarcher.com))

### **Recruiting and training peer mentors**

Mentors with better "attitudes towards youth" were more effective with academically disconnected mentees (and negative mentors had bad effects)

Karcher, M. J., Davidson, A., Rhodes, J. E., & Herrera, C. (2010). Pygmalion in the program: The role of teenage peer mentors' attitudes in shaping their mentees' outcomes. *Applied Developmental Science*, 14(4), 212-227.

The above article discusses connectedness. Teen mentors with more positive attitudes towards youth had bigger effects on their mentees, and particularly those mentees who were more academically disconnected. The mentees were related using the "Connectedness to school" scale in the survey in:

Karcher, M. J. & Sass, D. (2010). A multicultural assessment of adolescent connectedness: Testing measurement invariance across gender and ethnicity. *Journal of Counseling Psychology*, 57(2).

Mentors with higher Social Interest Scale (SIS) scores were more eager to work with challenging mentees and were more likely to persist as a mentor into a second year.

Karcher, M. J., & Lindwall, J. (2003). Social interest, connectedness, and challenging experiences. What makes high school mentors persist? *Journal of Individual Psychology*, 59, 293-315.

Evidence that mentors' expectations are critical. Specifically mentors' efficacy is strongly and positively related to relationship quality; while the expectation and motivation to have fun and personally benefit from being a mentor is negatively associated with outcomes.

Karcher, M. J., Nakkula, M. J., Harris, J. (2005). Developmental mentoring match characteristics: The effects of mentors' efficacy and mentees' emotional support seeking on the perceived quality of mentoring relationships. *Journal of Primary Prevention*, 26, 93-110

### **Relationship styles (Instrumental and Developmental) and their ingredients (e.g., TEAM)**

Journal Issue in which all of the articles illustrate the TEAM framework elements.

Karcher, M. J., Nakkula, M. J. (Eds.)(2010). Play, talk, learn: Promising practices in youth mentoring. *New Directions for Youth Development* special issue, summer 2010, available on Amazon.com.

The TEAM Framework suggests effective matches include collaborative interactions (both mentor and mentee have a say in what they do), balance relational and goal-directive interactions, and balance playfulness and seriousness activity purposes.

Karcher, M. J., & Nakkula, M. J. (2010). Youth mentoring with a balanced focus, shared purpose, and collaborative interactions. *New Directions in Youth Development*, 126.

Evidence for the TEAM Framework article above. This article provides evidence of the importance of mentor-mentee collaboration in forging high quality relationships, and illustrates that both relational and goal-directed interactions make contributions to relationship quality.

Karcher, M. J., Herrera, C., & Hansen, K. (2010). "I dunno, what do you wanna do?": Testing a framework to guide mentor training and activity selection. *New Directions in Youth Development*, 126. \*

Article on program evaluation which illustrates that proximal and distal outcomes to consider when examining program outcomes. Illustrates the instrumental and developmental mentoring styles that are presented in the TEAM framework. Shows how proximal, enabling, and distal outcomes differ for these two approaches.

Karcher, M. J., Kuperminc, G., Portwood, S., Sipe, C., & Taylor, A. (2006). Mentoring programs: A framework to inform program development, research, and evaluation. *Journal of Community Psychology*, 34, 709-725.

### **Positive effects of highly trained peer mentors in structured after school program**

Peer mentoring can have positive effects on the teen mentors:

Karcher, M. J. (2009). Increases in academic connectedness and self-esteem among high school students who serve as cross-age peer mentors. *Professional School Counseling*, 12(4), 292-299. \*

Overview of the peer mentoring program Karcher talks about that uses a curriculum to orient the mentor and mentee interactions, monthly training events and quarterly multi-media presentations, quarterly parental engagement events on Saturdays, and a summer program to help maintain effects and retain program participants from one year to the next.

Karcher, M. J. (2008). The Cross-age Mentoring Program (CAMP): A developmental intervention for promoting students' connectedness across grade levels. *Professional School Counseling*, 12(2), 137-143.

Evidence of the positive effects of the CAMP, cross-age peer mentoring program on social skills, school connectedness, and self-esteem.

Karcher, M. J. (2005). The effects of school-based developmental mentoring and mentors' attendance on mentees' self-esteem, behavior, and connectedness. *Psychology in the Schools*, 42, 65-77.\*

First study of the CAMP program, illustrating that the effects of this program on academic outcomes were mediated by ("explained as a function of") improvements in connectedness to parents. Article reports the same finding as Grossman and Rhodes (2002).

Karcher, M. J., Davis, C., & Powell, B. (2002). The effects of developmental mentoring on connectedness and academic achievement. *The School Community Journal*, 12, 36-50.

Two practitioner-oriented summaries of school-based and peer mentoring from MENTOR.

Karcher, M. J. & Herrera, C. (2007). School-based mentoring. *Youth Mentoring: Research in Action*, 1(6), 3-16.

Karcher, M. J. (2007). Cross-age peer mentoring. *Youth Mentoring: Research in Action*, 1(7), 3-17.

### **Need for different approaches for adolescents in schools**

The "first" large-scale randomized study of school-based mentoring. The only study of school-based mentoring with enough high school students to test its effects on them. Evidence suggests positive effects for elementary school boys but possible negative effects for high school aged boys. Justification for the need to consider alternative approaches to school-based mentoring for teenage boys, like iMentor, or Leadership mentoring, etc.

Karcher, M. J. (2008). The Study of Mentoring in the Learning Environment (SMILE): A randomized evaluation of the effectiveness of school-based mentoring. *Prevention Science*, 9(2), 99-113.\*

### **The importance of program staff's training and relationship with others in mentoring site**

Karcher, M. J. & Spencer, R. (in preparation). The Study of Mentoring in the Learning Environment (SMILE): Multilevel modeling of setting-level program staff contributions to school-based mentoring program effectiveness.\*

Karcher, M. J., Crisp, G. & Herrera, C. (in preparation). Easy come, easy go: How mentor training and mentoring activities contribute to relationship quality and mentors' intentions to volunteer in the future.

### **Closure and termination: Planning for and maximizing benefits of farewell practices**

Book Chapter: Importance of using a formal closure process to avoid heartbreak

Karcher, M. J. (2006). What happens when high school mentors don't show up? In L. Golden. & P. Henderson (Eds.), *Case studies in school counseling* (pp. 44-53). Alexandria, VA: ACA Press.

Lakes, K. & Karcher, M. J. (2005). Mentor/mentee termination ritual. In *MENTOR/National Mentoring Partnership (2005). How to build a successful mentoring program using the Elements of Effective Practice: A step-by-step tool kit for program managers* (p. 157-158). Alexandria, VA: Author. Retrieved January 1, 2007 from [www.mentoring.org/program\\_staff/eptoolkit/operations/closure/terminationritual.doc](http://www.mentoring.org/program_staff/eptoolkit/operations/closure/terminationritual.doc)

### **Non-refereed publications, creative works/publications etc.**

Karcher, M. J. (2007). Meet-n-Greet: A mentor-mentee matching approach for increasing the prevalence of naturally self-selected mentoring partners in program-based matches. Unpublished manuscript, University of Texas at San Antonio. Retrieved January 2, 2008 from <http://www.utsasmile.org>.

Karcher, M. J. (2004). Mentor Activity Log from the William T. Grant Foundation funded Study of Mentoring in the Learning Environment (S.M.I.L.E.): Year I results. Unpublished report, University of Texas at San Antonio.